

Name:

Date:

Class:

## Functions of the ECM Pre-Activity

Go to [Khan Academy ECM Video](#) or google Extracellular matrix Khan academy video.

Then answer the following questions:

1. What is the relationship between cells and tissues?
2. What is the extracellular matrix?
3. What are the three main components of the ECM? Which one is most abundant in mammals?
4. What are the three roles of the ECM in the cellular environment?
5. Why is it important for the outside ECM to be connected to the inside of the cell?

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Analyze “[Cancer cells with trapped nuclei cut their way through the ECM](#)” article. Read the article and then answer the following questions:

1. Why are dendritic cells more likely to deform their nucleus?
2. What are the nuclear lamins? What is their purpose?
3. How do dendritic cells help facilitate their movement through small spaces?
4. Examine the picture in the article (Fig. 1): What is the difference in how cells behave in a matrix with large pores versus small pores?
5. What is the relationship between nuclear deformation and DNA damage?
6. How are cancer cells different in terms of nuclear deformation, than normal cells?